

APPENDIX 4

STAGE 2 ARCHAEOLOGICAL ASSESSMENT REPORT



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Mar 7, 2018

Philip Woodley (P018)
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RE: Review and Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, "STAGE 2 ARCHAEOLOGICAL ASSESSMENT OF REGIONAL ROAD 81 (KING STREET) FROM GREEN LANE TO LINCOLN AVENUE LOTS 19 TO 22, CONCESSION 2 AND LOTS 18 AND 19 CONCESSION 3 IN THE GEOGRAPHIC TOWNSHIP OF CLINTON, LINCOLN COUNTY, TOWN OF LINCOLN, REGIONAL MUNICIPALITY OF NIAGARA ", Dated Dec 20, 2017, Filed with MTCS Toronto Office on Jan 5, 2018, MTCS Project Information Form Number P018-0901-2017, MTCS File Number 0005453

Dear Mr. Woodley:

This office has reviewed the above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18.¹ This review has been carried out in order to determine whether the licensed professional consultant archaeologist has met the terms and conditions of their licence, that the licensee assessed the property and documented archaeological resources using a process that accords with the 2011 Standards and Guidelines for Consultant Archaeologists set by the ministry, and that the archaeological fieldwork and report recommendations are consistent with the conservation, protection and preservation of the cultural heritage of Ontario.

The report documents the assessment of the study area as depicted in Maps 7 through 13 of the above titled report and recommends the following:

1. No further assessment of the study corridor is required.

Based on the information contained in the report, the ministry is satisfied that the fieldwork and reporting for the archaeological assessment are consistent with the ministry's 2011 Standards and Guidelines for Consultant Archaeologists and the terms and conditions for archaeological licences. This report has been entered into the Ontario Public Register of Archaeological Reports. Please note that the ministry makes no representation or warranty as to the completeness, accuracy or quality of reports in the register.

Should you require any further information regarding this matter, please feel free to contact me.

Sincerely,

John Dunlop
Archaeology Review Officer

cc. Archaeology Licensing Officer
Scott Kozub, Kerry T. Howe Engineering Limited
Phil Lambert, Niagara Region

¹In no way will the ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.

**STAGE 2 ARCHAEOLOGICAL ASSESSMENT OF REGIONAL ROAD 81
(KING STREET) FROM GREEN LANE TO LINCOLN AVENUE
LOTS 19 TO 22, CONCESSION 2 AND LOTS 18 AND 19 CONCESSION 3 IN THE
GEOGRAPHIC TOWNSHIP OF CLINTON, LINCOLN COUNTY,
TOWN OF LINCOLN, REGIONAL MUNICIPALITY OF NIAGARA**

Original License Report

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Project # P018-0901-2017

October 14, 2017

EXECUTIVE SUMMARY

This report discusses the rationale, methods and results of the Stage 2 archaeological assessment for the proposed road and drainage improvements to a 2.5 km corridor of Regional Road 81 (King Street) between Green Lane and Lincoln Avenue in the Town of Lincoln, Regional Municipality of Niagara. Triggered by the *Environmental Assessment Act*, this assessment was undertaken as part of the Schedule C Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (Class EA) for the proposed municipal service improvements to Regional Road 81 (King Street). The study corridor is located on Lots 19 to 22, Concession 2 and Lots 18 and 19, Concession 3 in the Geographic Township of Clinton, Lincoln County. The study corridor measures approximately 2.5 km along Regional Road 81 (King Street) within the existing right-of-way (ROW), and overall measures 6.34 ha.

The Stage 1 archaeological assessment for this project was conducted by NDA in August 2016 (NDA 2017, P018-0813-2016). Detailed documentary research and a property inspection were completed and resulted in the identification of several features of archaeological potential within and immediately adjacent to the current study area. While most of the study corridor was visually determined to be disturbed, portions of the study area were noted as containing archaeological potential, and these areas were recommended for further assessment. NDA was contracted by Kerry T. Howe Engineering Ltd. on behalf of the Regional Municipality of Niagara to conduct this Stage 2 archaeological assessment. The Stage 2 archaeological assessment was completed between September 25 and 27, 2017. Visual, test pit, and combination surveys were completed throughout the study corridor. No archaeological resources were encountered.

On the basis of the above information, the following recommendations are made:

1. No further assessment of the study corridor is required.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	I
TABLE OF CONTENTS	II
LIST OF TABLES	III
LIST OF IMAGES	III
LIST OF MAPS	III
LIST OF APPENDICES	IV
PERSONNEL	V
1.0 PROJECT CONTEXT	1
1.1 Development Context	1
1.2 Historical Context	1
1.2.1 Settlement History	1
1.2.1.1 Pre-Contact	1
1.2.1.2 Post-Contact	2
1.2.2 Past and Present Land Use	3
1.3 Archaeological Context	4
1.3.1 Condition of the Property	5
1.3.2 Previous Archaeological Work	5
1.3.3 Registered or Known Archaeological Sites	6
2.0 STAGE 2 FIELD METHODS	7
3.0 RECORD OF FINDS	8
4.0 ANALYSIS AND CONCLUSIONS	8
5.0 RECOMMENDATIONS	9
6.0 ADVICE ON COMPLIANCE WITH LEGISLATION	10
7.0 IMAGES	11
8.0 MAPS	22
9.0 BIBLIOGRAPHY AND SOURCES	35
APPENDICES	38

LIST OF TABLES

Table 1: Pre-Contact Settlement History	2
Table 2: Post-Contact Settlement History	2
Table 3: Summary of Historic Ownership and Nearby Historic Features	4
Table 4: Registered or Known Archaeological Sites within 1 km	6
Table 5: Fixed Reference Landmarks (FRLs)	7

LIST OF IMAGES

Image 1: Environs, test pit survey at 5 m intervals facing southeast	11
Image 2: Environs, note road ditch facing southeast	11
Image 3: Environs and test pit survey facing northwest	12
Image 4: Environs and test pit survey facing southeast, note gravel shoulder and asphalt driveway	12
Image 5: Example of a disturbed test pit	13
Image 6: Environs facing northwest, note gravel shoulder	13
Image 7: Environs facing southeast, note gravel shoulder and culvert	14
Image 8: Environs and test pit survey facing north	14
Image 9: Example of a disturbed test pit	15
Image 10: Environs facing northwest, note gravel driveway	15
Image 11: Environs and test pit survey facing southeast, note road ditch	16
Image 12: Environs and test pit survey facing northwest, note gravel driveway	16
Image 13: Example of a disturbed test pit	17
Image 14: Environs and test pit survey facing northwest, note road ditch	17
Image 15: Environs and test pit survey facing southeast, note asphalt driveway	18
Image 16: Example of a disturbed test pit	18
Image 17: Environ and test pit survey facing northwest	19
Image 18: Environs and test pit survey facing southeast	19
Image 19: Environs facing southwest	20
Image 20: Environs facing southeast, note asphalt entrance to commercial lot	20
Image 21: Environs facing southeast, note asphalt and concrete entrance to commercial lot	21

LIST OF MAPS

Map 1: Location of Study Area on Topographic Map	22
Map 2: Study Area on G.R. and G.M. Tremaine's Map of the Counties of Lincoln and Welland, Canada West (1862)	23
Map 3: Study Area on H.R. Page & Co.'s Illustrated Historical Atlas of the Counties of Lincoln and Welland, Ont. (1876)	24
Map 4: Study Area on 1934 Aerial Imagery	25

Map 5: Study Area on 1954 Aerial Imagery	26
Map 6: Assessment Results - Overview	27
Map 7: Assessment Results – Tile 1	28
Map 8: Assessment Results – Tile 2	29
Map 9: Assessment Results – Tile 3	30
Map 10: Assessment Results – Tile 4	31
Map 11: Assessment Results – Tile 5	32
Map 12: Assessment Results – Tile 6	33
Map 13: Assessment Results – Tile 7	34

LIST OF APPENDICES

APPENDIX I: Unaltered Development Plans	39
APPENDIX II: Document Inventory	40

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1.0 PROJECT CONTEXT

1.1 Development Context

This report discusses the rationale, methods and results of the Stage 2 archaeological assessment for the proposed road and drainage improvements to a 2.5 km corridor of Regional Road 81 (King Street) between Green Lane and Lincoln Avenue in the Town of Lincoln, Regional Municipality of Niagara (Map 1). Triggered by the *Environmental Assessment Act*, this assessment was undertaken as part of the Schedule C Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (Class EA) for the proposed municipal service improvements to Regional Road 81 (King Street) (APPENDIX I). The study corridor is located on Lots 19 to 22, Concession 2 and Lots 18 and 19, Concession 3 in the Geographic Township of Clinton, Lincoln County. The study corridor measures approximately 2.5 km along Regional Road 81 (King Street) within the existing right-of-way (ROW), and overall measures 6.34 ha.

The Stage 1 archaeological assessment for this project was conducted by NDA in August 2016 (NDA 2017, P018-0813-2016). Detailed documentary research and a property inspection were completed and resulted in the identification of several features of archaeological potential within and immediately adjacent to the current study area. While most of the study corridor was visually determined to be disturbed, portions of the study area were noted as containing archaeological potential, and these areas were recommended for further assessment. NDA was contracted by Kerry T. Howe Engineering Ltd. on behalf of the Regional Municipality of Niagara to conduct this Stage 2 archaeological assessment.

Permission to access the property was granted to NDA by the property owner. Assessment activities were conducted in accordance with the provisions of the *Ontario Heritage Act* (R.S.O. 1990, c.o. 18) in compliance with the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011) under an archaeological consulting license (#P018) issued to Philip Woodley of NDA. The field notes, photos and related documents will be curated at the office of NDA (APPENDIX II).

1.2 Historical Context

After a century of archaeological work in southern Ontario, scholarly understanding of the historic usage of lands in the Regional Municipality of Niagara has become very well-developed. With occupation beginning in the Palaeo-Indian period approximately 11,000 years ago, the greater vicinity of the study area comprises a complex chronology of Pre-Contact and Euro-Canadian histories. Section 1.2.1 provides an overview of the region's settlement history, and Section 1.2.2 summarizes the past and present land use of the study area.

1.2.1 Settlement History

1.2.1.1 Pre-Contact

The Pre-Contact history of the region is both lengthy and rich due to the variety of Indigenous groups who inhabited the landscape. Archaeologists generally divide this complex history into three main periods: Palaeo-Indian, Archaic and Woodland. Each of these periods comprises a

range of discrete sub-periods characterized by specific material culture, settlement patterns and lifeways. The principal archaeological horizons/cultures of the region are summarized in Table 1.

Table 1: Pre-Contact Settlement History
(Wright 1972; Ellis and Ferris 1990; Warrick 2000; Munson and Jamieson 2013)

Sub-Period	Timeframe	Characteristics
<i>Early Palaeo-Indian</i>	9000–8400 BC	Gainey, Barnes and Crowfield traditions; Small bands; Mobile hunters and gatherers; Utilization of seasonal resources and large territories; Fluted projectiles
<i>Late Palaeo-Indian</i>	8400–7500 BC	Holcombe, Hi-Lo and Lanceolate biface traditions; Continuing mobility; Campsite/Way-Station sites; Smaller territories are utilized; Non-fluted projectiles
<i>Early Archaic</i>	7500–6000 BC	Side-notched, Corner-notched (Nettling, Thebes) and Bifurcate Base traditions; Growing diversity of stone tool types; Heavy woodworking tools appear (e.g., ground stone axes and chisels)
<i>Middle Archaic</i>	6000–2500 BC	Stemmed (Kirk, Stanly/Neville), Brewerton side- and corner-notched traditions; Reliance on local resources; Populations increasing; More ritual activities; Fully ground and polished tools; Net-sinkers common; Earliest copper tools
<i>Late Archaic</i>	2500–900 BC	Narrow Point (Lamoka), Broad Point (Genesee) and Small Point (Crawford Knoll) traditions; Less mobility; Use of fish-weirs; True cemeteries appear; Stone pipes emerge; Long-distance trade (marine shells and galena)
<i>Early Woodland</i>	900–400 BC	Meadowood tradition; Crude cord-roughened ceramics emerge; Meadowood cache blades and side-notched points; Bands of up to 35 people
<i>Middle Woodland</i>	400 BC–AD 600	Saugeen tradition; Stamped ceramics appear; Saugeen projectile points; Cobble spall scrapers; Seasonal settlements and resource utilization; Post holes, hearths, middens, cemeteries and rectangular structures identified
<i>Middle/Late Woodland Transition</i>	AD 600–900	Princess Point tradition; Cord roughening, impressed lines and punctate designs on pottery; Adoption of maize horticulture at the western end of Lake Ontario; Oval houses and ‘incipient’ longhouses; First palisades; Villages with 75 people
<i>Late Woodland (Early Iroquoian)</i>	AD 900–1300	Glen Meyer tradition; Settled village-life based on agriculture; Small villages (0.4 ha) with 75–200 people and 4–5 longhouses; Semi-permanent settlements
<i>Late Woodland (Middle Iroquoian)</i>	AD 1300–1400	Uren and Middleport traditions; Classic longhouses emerge; Larger villages (1.2 ha) with up to 600 people; More permanent settlements (30 years)
<i>Late Woodland (Late Iroquoian)</i>	AD 1400–1600	Pre-Contact Neutral tradition; Larger villages (1.7 ha); Examples up to 5 ha with 2,500 people; Extensive croplands; Also hamlets, cabins, camps and cemeteries; Potential tribal units; Fur trade begins ca. 1580; European trade goods appear

1.2.1.2 Post-Contact

The arrival of the European explorers and traders at the beginning of the 17th century triggered widespread shifts in Indigenous lifeways and set the stage for the ensuing Euro-Canadian settlement process. Documentation for this period is abundant, ranging from the first sketches of Upper Canada and the written accounts of early explorers to detailed township maps and lengthy histories. The Post-Contact period can be effectively discussed in terms of major historical events, and the principal characteristics associated with these events are summarized in Table 2.

Table 2: Post-Contact Settlement History
(Smith 1846; Warnock 1862; Coyne 1895; Lajeunesse 1960; Cumming 1972; Smith 1987; Ellis and Ferris 1990; Surtees 1994; NRC 2010; AO 2011)

Historical Event	Timeframe	Characteristics
Early Contact	Early 17 th century	Brûlé explores the area in 1610; Champlain visits in 1613 and 1615/1616; Iroquoian-speakers (Huron, Petun and Neutral) and Algonkian-speakers (Anishinabeg) encountered; European goods begin to replace traditional tools
Five Nations Invasion	Mid-17 th century	Haudenosaunee (Five Nations) invade ca. 1650; Neutral, Huron and Petun Nations are defeated/removed; vast Iroquoian hunting territory established in the second half of the 17 th century; Explorers continue to document the area
Anishnabeg Influx	Late 17 th and early 18 th century	Ojibway, Odawa and Potawatomi expand into Haudenosaunee lands in the late 17 th century; Nanfan Treaty between Haudenosaunee and British in 1701; Anishnabeg occupy the area and trade directly with the French and English
Fur Trade Development	Early and mid-18 th century	Growth and spread of the fur trade; Peace between the French and English with the Treaty of Utrecht in 1713; Ethnogenesis of the Métis; Hostilities between French and British lead to the Seven Years' War in 1754; French surrender in 1760
British Control	Mid-18 th century	<i>Royal Proclamation</i> of 1763 recognizes the title of the First Nations to the land; Numerous treaties arranged by the Crown; First acquisition is the Seneca surrender of the west side of the Niagara River in August 1764
Loyalist Influx	Late 18 th century	United Empire Loyalist influx after the American Revolutionary War (1775–1783); British develop interior communication routes and acquire additional lands; 'Between the Lakes Purchase' in 1784 orchestrated by Haldimand to obtain lands for Six Nations; <i>Constitutional Act</i> of 1791 creates Upper and Lower Canada
Lincoln County Development	Late 18 th and early 19 th century	The lands comprising Lincoln County were originally included within the Nassau District until 1792 when Lieutenant-Governor Simcoe created the Home District. Lincoln County was created at this time within the Niagara District and included present day Welland County. In 1845, Welland County separated from Lincoln, with Lincoln being comprised of the Townships of Caistor, Clinton, Gainsborough, Grantham, Grimsby, Louth, and Niagara. In 1970, Lincoln and Welland counties re-amalgamated to form the Regional Municipality of Niagara.
Clinton Formation and Development	19 th century	The historic Township of Clinton, located in the district of Niagara, is said to have been an old settled township by 1846. The land contained many good farms where 10,605 acres were under cultivation of the total 23,378 acres, with one grist mill and six sawmills in operation. By 1841, the population of Clinton was 2,122 individuals. In 1876, Clinton was described as "good, if not the best agricultural township in the Niagara Peninsula. Clinton is well-watered by the 30 Mile Creek, Konkle's Creek, Red Creek and several other small streams, while the topography comprises easy gentle slopes or moderately rolling with an excellent quality of soil that is well adapted to agriculture and horticulture. Growth in the township was swift, and by 1876 there were eleven churches, eleven schools, seven sawmills, two 2 gristmills, one tobacconist establishment and a broom factory. One macadamized road passed through the township by 1876 (Queenston and Grimsby Road), which was originally intended as the Great Military Road of the Province.

1.2.2 Past and Present Land Use

The study corridor is located on Lots 19 to 22, Concession 2 and Lots 18 and 19, Concession 3 in the Geographic Township of Clinton, Lincoln. In an attempt to reconstruct the historic land use of the study corridor, NDA conducted a review of nineteenth century maps and twentieth century aerial photographs focused on the study corridor. This was completed in order to provide insight in to the past and present land use and settlement history of the property.

Review of Nineteenth Century Maps

The nineteenth century maps reviewed include G.R. and G.M. Tremaine's *Map of the Counties of Lincoln and Welland, Canada West* (1862) (Map 2) and H.R. Page & Co.'s *Illustrated Historical Atlas of the Counties of Lincoln and Welland, Ont.* (1876) (Map 3). The ownership and settlement

features of Lots 19 to 22 and Concession 2 and Lots 18 to 19, Concession 3 are documented in Table 3.

Table 3: Summary of Historic Ownership and Nearby Historic Features
(Tremaine 1862; H.R. Page & Co. 1876)

Location		1862 (Tremaine's)			1876 (H.R. Page)		
Lot	Con	Part	Owner(s)	Feat.	Acres	Owner(s)	Feat.
20	2	All	James Paton	1 Structure	All	Andrew Ridley	-
21	2	All	Joseph Simmerman	2 Structures	All	Joseph Zimmerman	1 Structure 1 Orchard
22	2	All	John McLean	1 Saw Mill 1 Structure	All	John McLean	4 Structures 1 Orchard 1 Sawmill 1 Blacksmith Shop
18	3	All	Rawley Kilborn	-	All	Rosetta McGregor	3 Structures 1 Orchard
19	3	All	William Snyder	1 Structure	All	William Snyder	1 Structure

The 1862 Tremaine map shows the study corridor runs along a historically laid road that extends west from Grimsby towards the village of Beamsville, and that traverses several waterways. Several structures were illustrated within the vicinity of the study corridor including one on each of Lots 20 to 22 Concession 2 and one on Lot 19, Concession 3. The 1876 H.R. Page & Co. Atlas illustrates a more developed thoroughfare with additional structures having been constructed along the roadway along with two orchards.

The nineteenth century map review has demonstrated that while numerous historic structures were located in the area surrounding the study corridor, no structures were located immediately within study corridor. This is unsurprising given the study corridor is a historical road. It is certainly likely that some of the structures documented on the nineteenth century maps may have been located immediately adjacent to the study corridor, and possibly within the present ROW. It is also noted that not all structures were illustrated on historic maps and as a result, additional structures such as outbuildings may be present within the study corridor. Given the proximity of the study corridor to documented historic roadways (King Street, Thirty Road and Lincoln Avenue), documented structures, and its location between historic Grimsby and Beamsville, there is a distinct possibility of locating historic materials within the study corridor.

Review of Twentieth Century Aerial Photographs

A review of 20th century aerial photographs demonstrate that there have not been significant alterations to the study corridor. Imagery from 1934 and 1954 show that the study corridor and its general surroundings were agricultural in nature, with roadways and houses present along the study corridor (Map 4 and Map 5).

Currently, the study corridor is comprised of Regional Road 81 (King Street) and its right-of way (ROW) including soft shoulders, ditches, and small portions of the manicured lawns and driveways located within the Region's ROW.

1.3 Archaeological Context

The archaeological context of any given study area must be informed by the general condition of the property (Section 1.3.1), summaries of any previous archaeological work conducted within 50 m of the subject property (Section 1.3.2) and whether there are any registered or known

archaeological sites located within 1 km of the study area (Section 1.3.3). The Stage 2 archaeological assessment was carried out on September 25 to 27, 2017, and the specific weather and lighting conditions are summarized in Section 2.0.

1.3.1 Condition of the Property

The study corridor is located within the deciduous forest region of southern Ontario, which is dominated by agricultural and rural areas. In terms of physiography, this study corridor is located within the Iroquois Plain, a former zone of beaches along ancient glacial Lake Iroquois (Chapman & Putnam 1984: 190). The Iroquois Plain physiographic region borders the western portion of Lake Ontario from the Niagara River to the Trent River and was formed as a result of glacial recession and the emptying of Lake Iroquois towards New York State, and is comprised of myriad soil variations (Chapman and Putnam 1984: 190-196).

More specifically, the study corridor includes a 2.5 km stretch of Regional Road 81 from approximately 100 m east of the intersection between King Street and Lincoln Avenue westward to approximately 150 m southeast of the traffic circle at Durham Road and King Street. The project location also includes 100 m along the following intersecting roads and their ROWs: Lincoln Avenue, Mountainview Road and Thirty Road. Their rights-of-way (ROWs) of Regional Road 81 and its crossroads vary in width between 15 m and 50 m. Portions of the study corridor also encompass the residential lawns and driveways located within the Region's ROW. In terms of drainage, Thirty Mile Creek traverses the study corridor, as do several tributaries of Lake Ontario. The study corridor is 1.4 km west of Bartlett Creek, 2.2 km northeast of Grimsby Woodlot Swamp and 1.9 km from Lake Ontario. In general, the topography slopes down toward Lake Ontario (Map 1), and the soils within the study corridor are comprised mostly of Miscellaneous (NM) soils as well as Chinguacousy (CGU-3 and CGU-10), Oneida (OID-5), Trafalgar (TFG-2 and TFG-4) and Tavistock (TVK-11) soils, all of which are poorly drained (Presant & Wicklund 1963).

1.3.2 Previous Archaeological Work

The MTCS's Ontario Archaeological Sites Database was consulted to determine whether any archaeological assessments had been previously conducted within the limits of, or immediately adjacent to the study area. It was determined that there are two reports on record that document previous archaeological fieldwork within a 50 m of the study area, including the Stage 1 report for this project (NDA 2017).

The Stage 1-2 Archaeological Assessment (Background Study and Property Assessment) King Street (Regional Road 81) and Greenland Roundabout Municipal Class Environmental Assessment Park of Lots 22 and 23, Concessions 1 and 2, Former Township of Clinton, County of Lincoln, Town of Lincoln, Regional Municipality of Niagara, Ontario (P392-0707-2014) (ASI 2014)

The above report documents the Stage 1-2 archaeological assessment for the proposed King Street (Regional Road 81) and Greenland Roundabout in the Town of Lincoln, Regional Municipality of Niagara. Located approximately 50 m from the western edge of the current study area, this assessment was comprised of background research as well as visual and test pit surveys. No

archaeological resources were encountered, and the no further assessment of the study area was recommended.

Stage 1 Archaeological Assessment of Regional Road 81 (King Street) from Green Lane to Lincoln Avenue Lots 19 To 22, Concession 2 and Lots 18 and 19 Concession 3 in the Geographic Township of Clinton, Lincoln County, Town of Lincoln, Regional Municipality of Niagara (P018-0813-2016) (NDA 2017)

The Stage 1 archaeological assessment for this project was conducted by NDA in August 2016 (NDA 2017, P018-0813-2016). Detailed documentary research and a property inspection were completed and resulted in the identification of several features of archaeological potential within and immediately adjacent to the current study corridor. For example, the study corridor was traversed by Thirty Mile Creek, and three archaeological sites were previously registered within 1 km of the corridor. Based on the property inspection, small portions of the study corridor appeared to retain archaeological potential. However, most of the lands had been subject to deep and extensive land alterations that removed archaeological potential within the study corridor. Disturbances were related to the construction of Regional Road 81, its cross streets, residential development, and utility infrastructures. Given the above, NDA recommended that a Stage 2 archaeological assessment of lands noted as containing archaeological potential be completed prior to ground disturbing activities (NDA 2017:9).

1.3.3 Registered or Known Archaeological Sites

The MTCS's Ontario Archaeological Sites Database was consulted to determine whether any registered or known archaeological resources are located within 1 km of the study area. While no sites are located within the study corridor, ten sites have been previously registered within 1 km (Table 4). None of these sites are located within 50 m of the study corridor.

Table 4: Registered or Known Archaeological Sites within 1 km

Borden No.	Site Name	Cultural Affiliation	Site Type	Current Development Status	Researcher (s)
AgGu-59	Hillview Estates	Pre-Contact	Camp	No Further CHVI	Griffin-Short 1994
AgGu-63	Highland Estates 1	Woodland, Late	Findspot	No Further CHVI	Mayer 1994
AgGu-64	Highland Estates 2	Woodland, Late	Findspot	No Further CHVI	Mayer 1994
AgGu-65	Highland Estates 3	Pre-Contact	Camp	No Further CHVI	Mayer 1994
AgGu-66	Highland Estates 4	Pre-Contact	Camp	No Further CHVI	Mayer 1994
AgGu-134	-	Archaic, Paleo-Indian, Late	Camp	No Further CHVI	Woodley 2004
AgGu-135	-	Archaic, Paleo-Indian, Late	Camp	No Further CHVI	Woodley 2004
AhGu-31	NRWC-51	Pre-Contact Euro-Canadian	Unknown	Further CHVI	Wilson 2017
AhGv-26	Vineyard Valley	Pre-Contact	Unknown	Unknown	MIA 1984
AhGx-690	Location 1071	Pre-Contact Euro-Canadian	Camp	Further CHVI	Wilson 2012

2.0 STAGE 2 FIELD METHODS

The entire study area (100%) was subject to a Stage 2 archaeological assessment as per Section 2.1 of the *Standards and Guidelines for Consultant Archaeologists (S&Gs)* (MTCS 2011). All encountered field conditions were photo-documented (Map 6 to Map 13, Image 1 to Image 21). The assessment was undertaken during sunny conditions with hot temperatures (28°C to 32 °C), and at no time during the assessment did weather conditions adversely affect visibility.

Approximately 73.9% of the study corridor was previously determined to be disturbed, and was not subject to the Stage 2 assessment (NDA 2017, P018-0813-2016). Approximately 9.1% of the study corridor was visually determined to be disturbed based on the presence of drainage ditches and culverts located along the roadway (Image 2, Image 7, Image 11, and Image 14), gravel shoulders (Image 4, Image 6, and Image 12), and gravel and asphalt driveways to residential and commercial lots (Image 10, Image 15, Image 20, and Image 21). Approximately 1% of the study corridor was subject to a test pit survey at 5 m intervals (Image 1). Upon the commencement of the test pit survey, it became clear that soil profiles exhibited evidence of disturbance, containing asphalt, concrete, metal, and gravel deposits to depths of 60 cm or more (e.g. Image 9). As a result, the test pit strategy was altered, and a combination survey was completed throughout the remaining 16% of the study corridor (Image 3 and Image 11). The combination survey consisted of a mixture of visual and test pit surveys to confirm disturbance. Where disturbance was evident on the ground surface, a visual survey was completed. Where the level of disturbance was not clearly evident on the ground surface, test pits were excavated. When test pits revealed disturbed soil profiles, test pit survey intervals were increased from a 5 m interval to a 10 m interval to confirm disturbance. Where small pockets of natural soils were encountered, the test pit survey resumed at 5 m intervals until disturbance was once again encountered.

Test pits were hand excavated, measured approximately 30 cm in diameter, and were excavated 5 cm into subsoil, or to a sufficient depth to confirm disturbance (Image 5, Image 9, Image 13, and Image 16). Test pits were excavated within 1 m of built structures. The topsoil was shoveled into a 6 mm mesh screen and sifted to recover artifacts. The profiles of each test pit were examined for stratified layers and/or disturbance. All the test pits demonstrated evidence of disturbance, being comprised of hard packed reddish-brown soil with significant asphalt, concrete, metal, and gravel inclusions. Grey clay was also present within a number of test pits. Test pits ranged in depth between 30 cm and 90 cm, with no subsoil encountered. All test pits were backfilled. The poor integrity of the lands adjacent to the roadway are consistent with disturbance resulting from road and ditch construction.

Two fixed reference landmarks (FRLs) and site locational information were recorded using differential GPS extended readings with an ALTO-G12 from Corvallis Micro Technology under clear skies and open canopy and were post-processed. GPS recordings were made using UTM 17T (NAD 83) with an accuracy reading of under 1 m (Table 5).

Table 5: Fixed Reference Landmarks (FRLs)

Fixed Reference Landmark	Landmark Type	UTM Zone	Easting (m)	Northing (m)
FRL1	Utility Pole	17	621,367	4,781,750
FRL2	Utility Pole	17	621,382	4,781,757

Fixed Reference Landmark	Landmark Type	UTM Zone	Easting (m)	Northing (m)
FRL3	Utility Pole	17	622,904	4,780,752
FRL4	Utility Pole	17	622,950	4,780,731

3.0 RECORD OF FINDS

No archaeological resources were encountered during the Stage 2 archaeological assessment.

4.0 ANALYSIS AND CONCLUSIONS

NDA has completed a Stage 2 archaeological assessment for the proposed road and drainage improvements to a 2.5 km corridor of Regional Road 81 (King Street) between Green Lane and Lincoln Avenue in the Town of Lincoln, Regional Municipality of Niagara. The study corridor was subject to visual, test pit, and combination surveys. No archaeological resources were encountered.

5.0 RECOMMENDATIONS

On the basis of the above information, the following recommendations are made (Map 6 to Map 13):

1. No further assessment of the study corridor is required.

6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

Section 7.5.9 of the S&Gs requires that the following information be provided for the benefit of the proponent and approval authority in the land use planning and development process (MTCS 2011:126–127):

1. This report is submitted to the *Minister of Tourism, Culture and Sport* as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the *Ministry of Tourism, Culture and Sport*, a letter will be issued by the ministry stating that there are no further concerns with regard to alteration to archaeological sites by the proposed development.
2. It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such times as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the *Ontario Public Register of Archaeology Reports* referred to in Section 65.1 of the *Ontario Heritage Act*.
3. Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.
4. The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the *Ministry of Consumer Services*.
5. Archaeological sites recommended for further archaeological field work or protection remain subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered nor may artifacts be removed from them, except by a person holding an archaeological license.

7.0 IMAGES



Image 1: Environs, test pit survey at 5 m intervals facing southeast



Image 2: Environs, note road ditch facing southeast



Image 3: Environs and test pit survey facing northwest



Image 4: Environs and test pit survey facing southeast, note gravel shoulder and asphalt driveway



Image 5: Example of a disturbed test pit



Image 6: Environs facing northwest, note gravel shoulder



Image 7: Environs facing southeast, note gravel shoulder and culvert



Image 8: Environs and test pit survey facing north



Image 9: Example of a disturbed test pit



Image 10: Environs facing northwest, note gravel driveway



Image 11: Environs and test pit survey facing southeast, note road ditch



Image 12: Environs and test pit survey facing northwest, note gravel driveway



Image 13: Example of a disturbed test pit



Image 14: Environs and test pit survey facing northwest, note road ditch

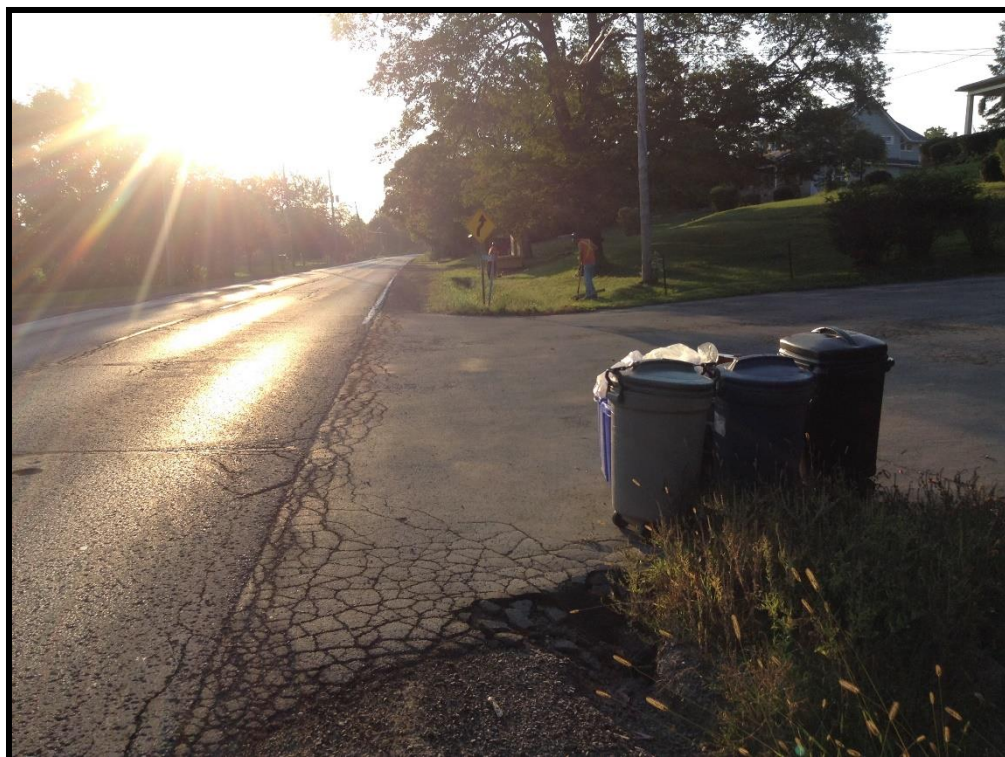


Image 15: Environs and test pit survey facing southeast, note asphalt driveway



Image 16: Example of a disturbed test pit



Image 17: Environ and test pit survey facing northwest



Image 18: Environs and test pit survey facing southeast



Image 19: Environs facing southwest

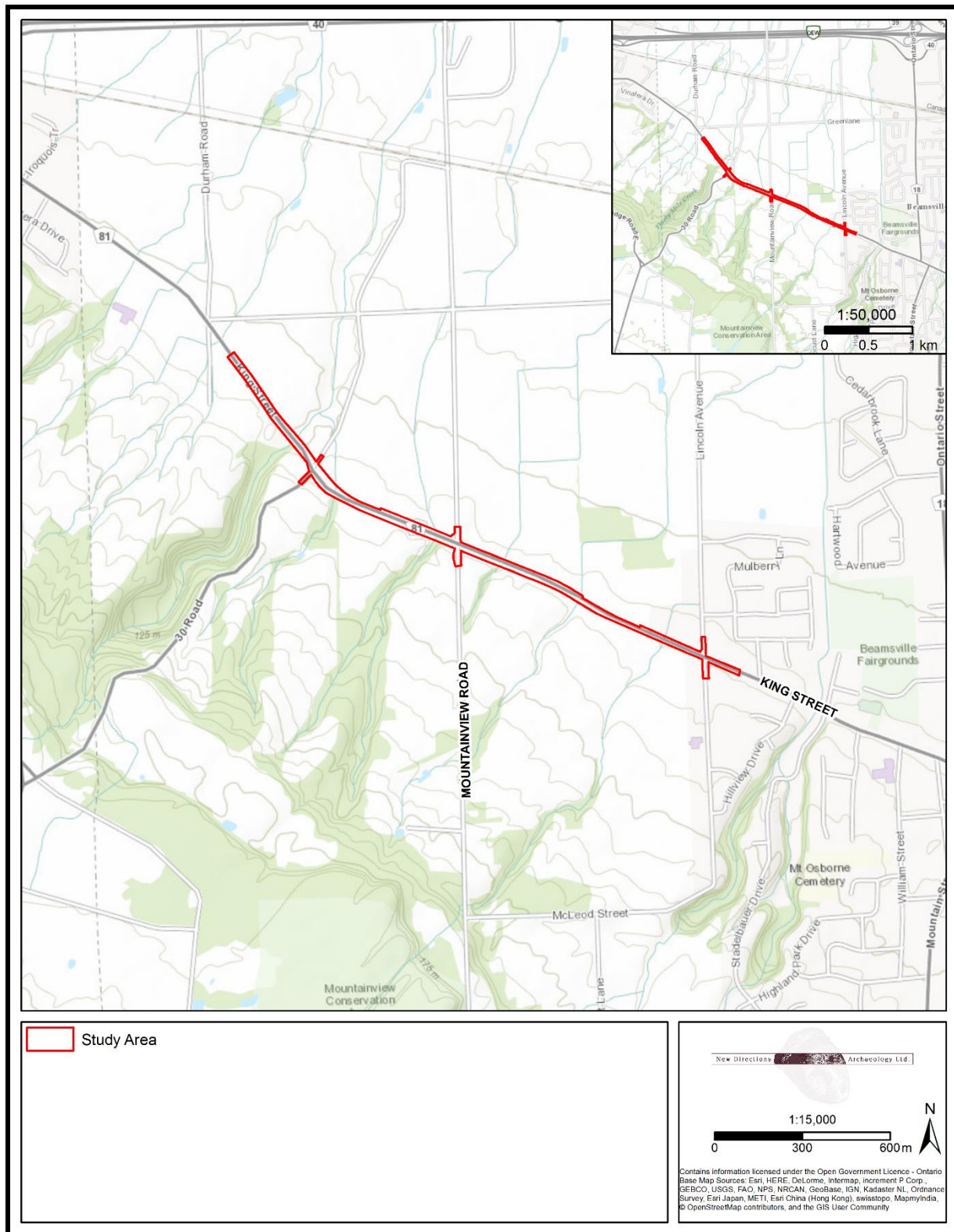


Image 20: Environs facing southeast, note asphalt entrance to commercial lot



Image 21: Environs facing southeast, note asphalt and concrete entrance to commercial lot

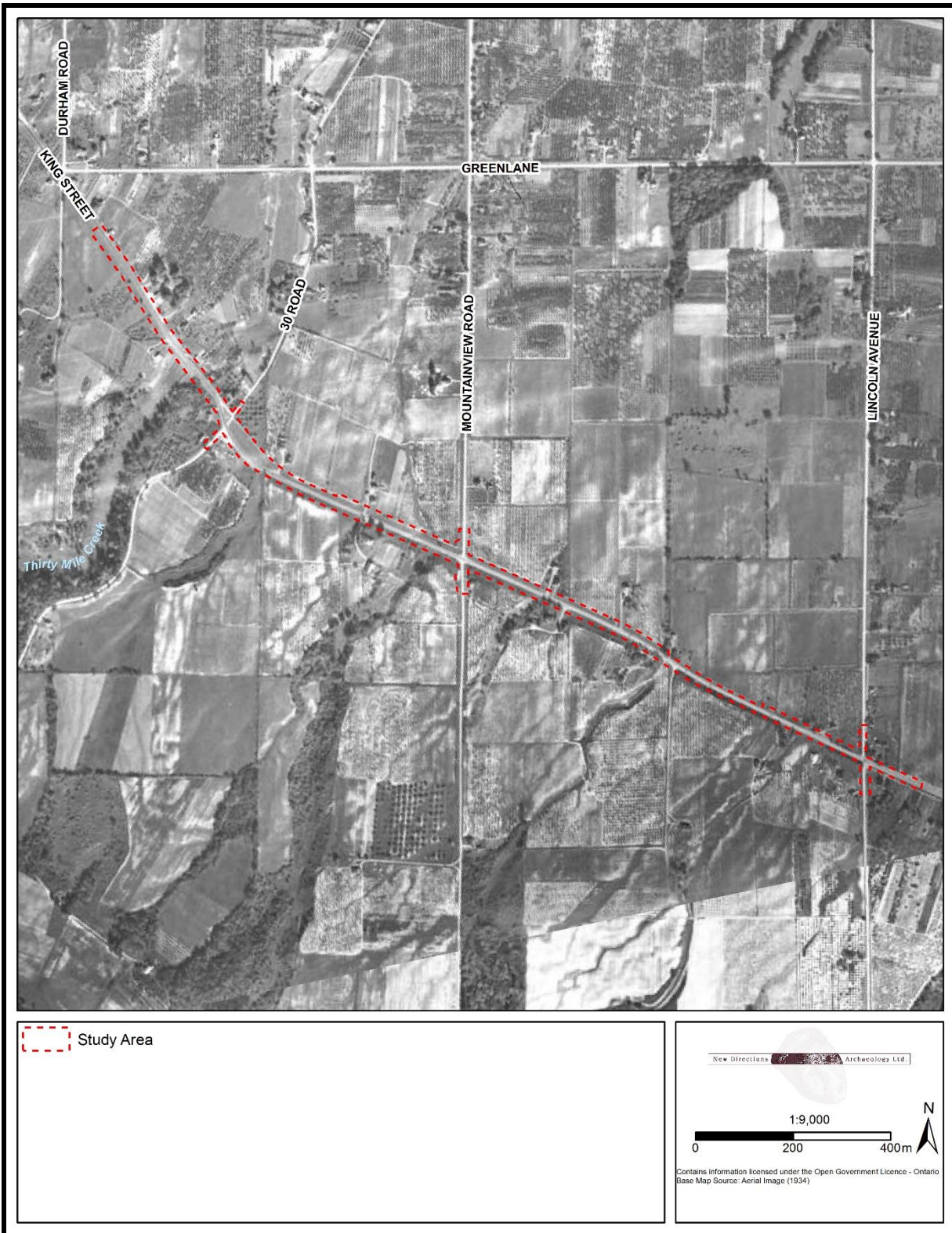
8.0 MAPS



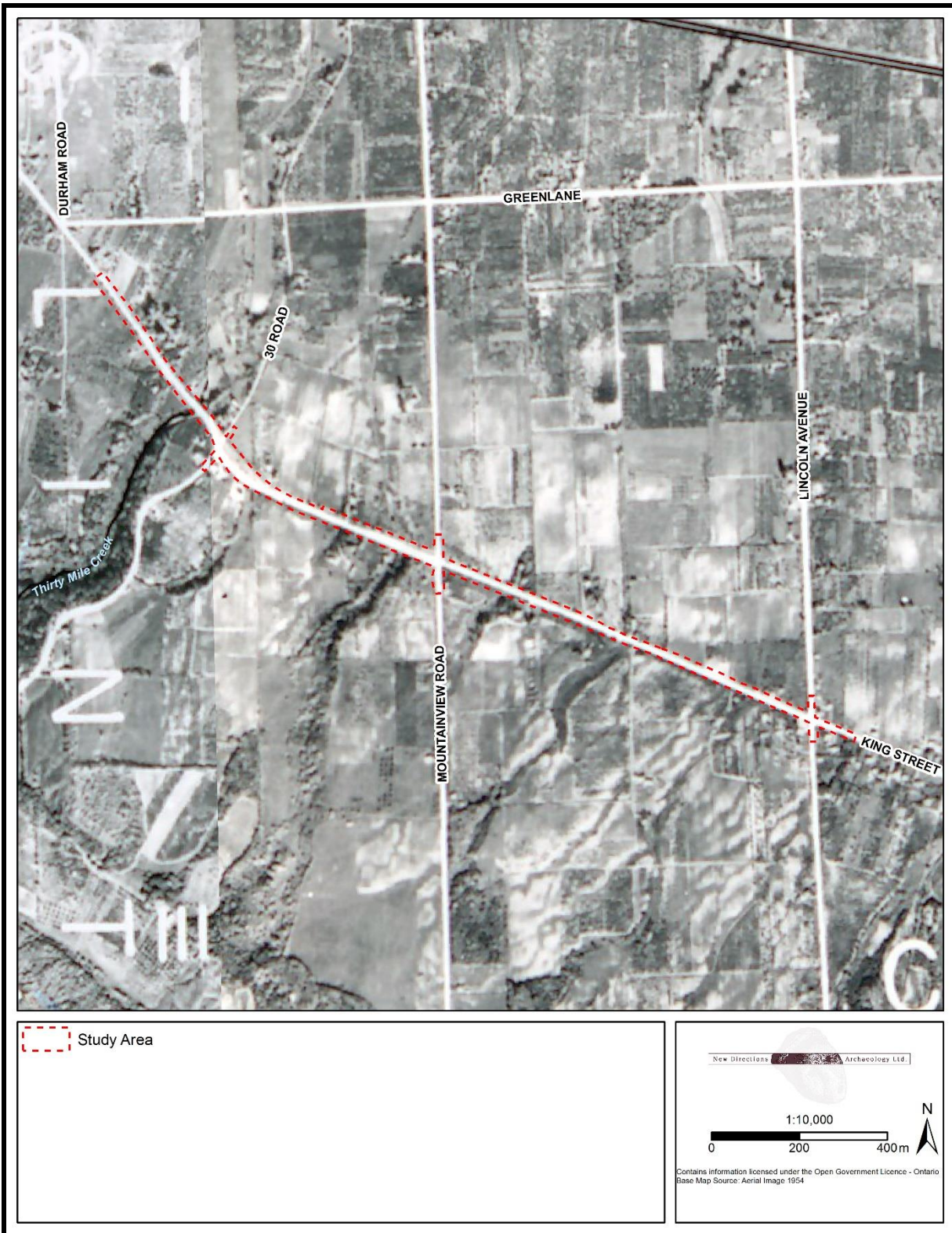




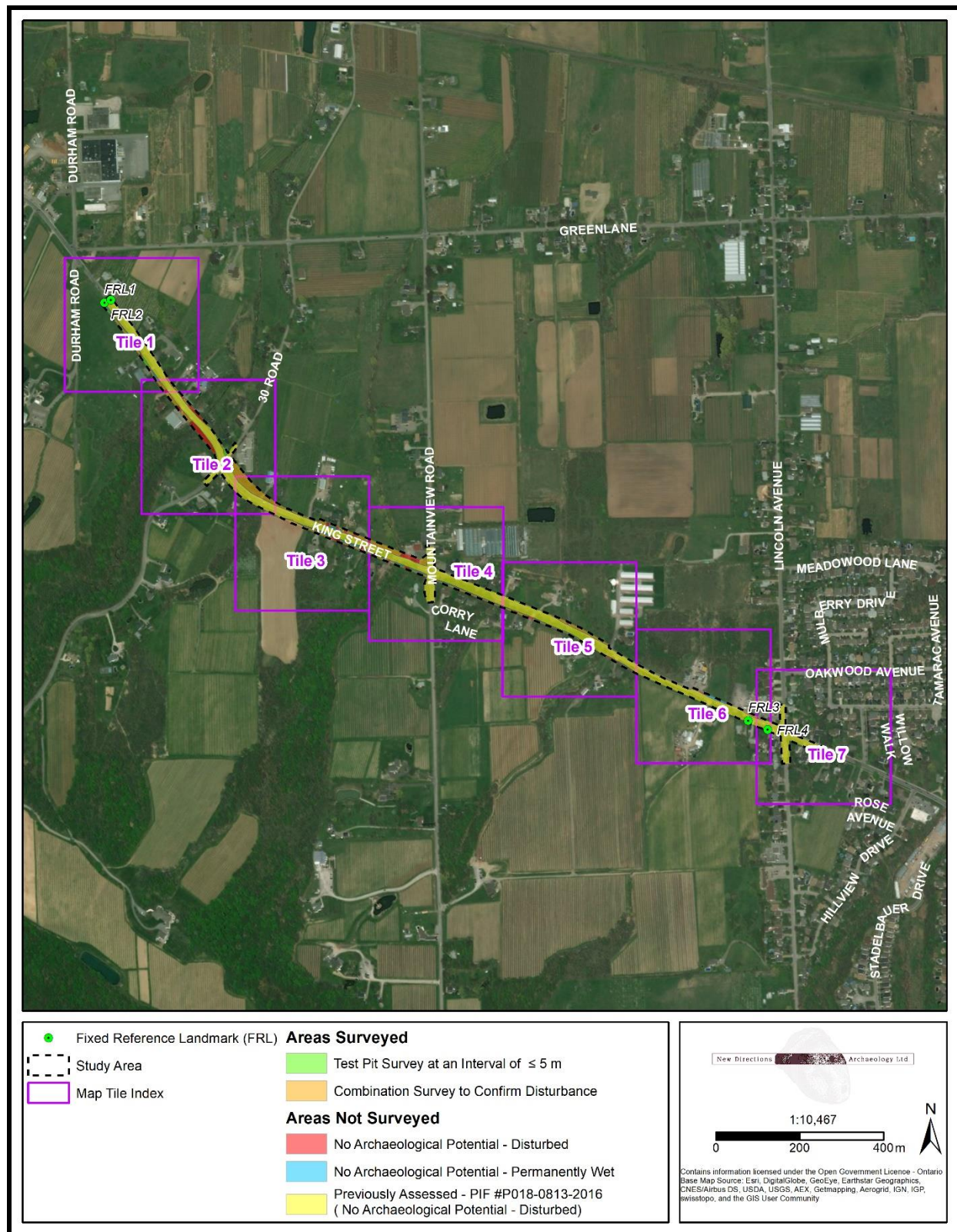
Map 3: Study Area on H.R. Page & Co.'s *Illustrated Historical Atlas of the Counties of Lincoln and Welland, Ont.* (1876)



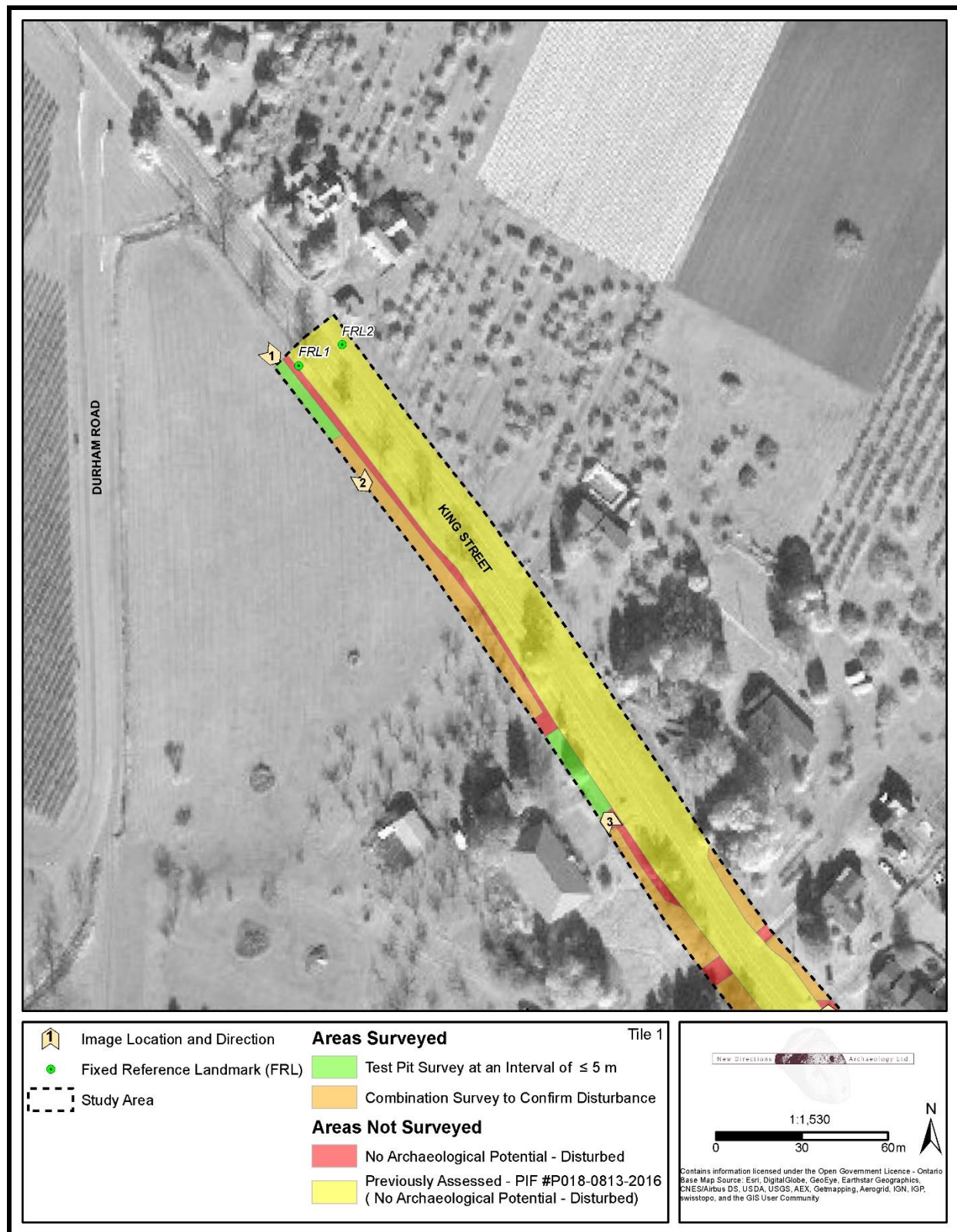
Map 4: Study Area on 1934 Aerial Imagery

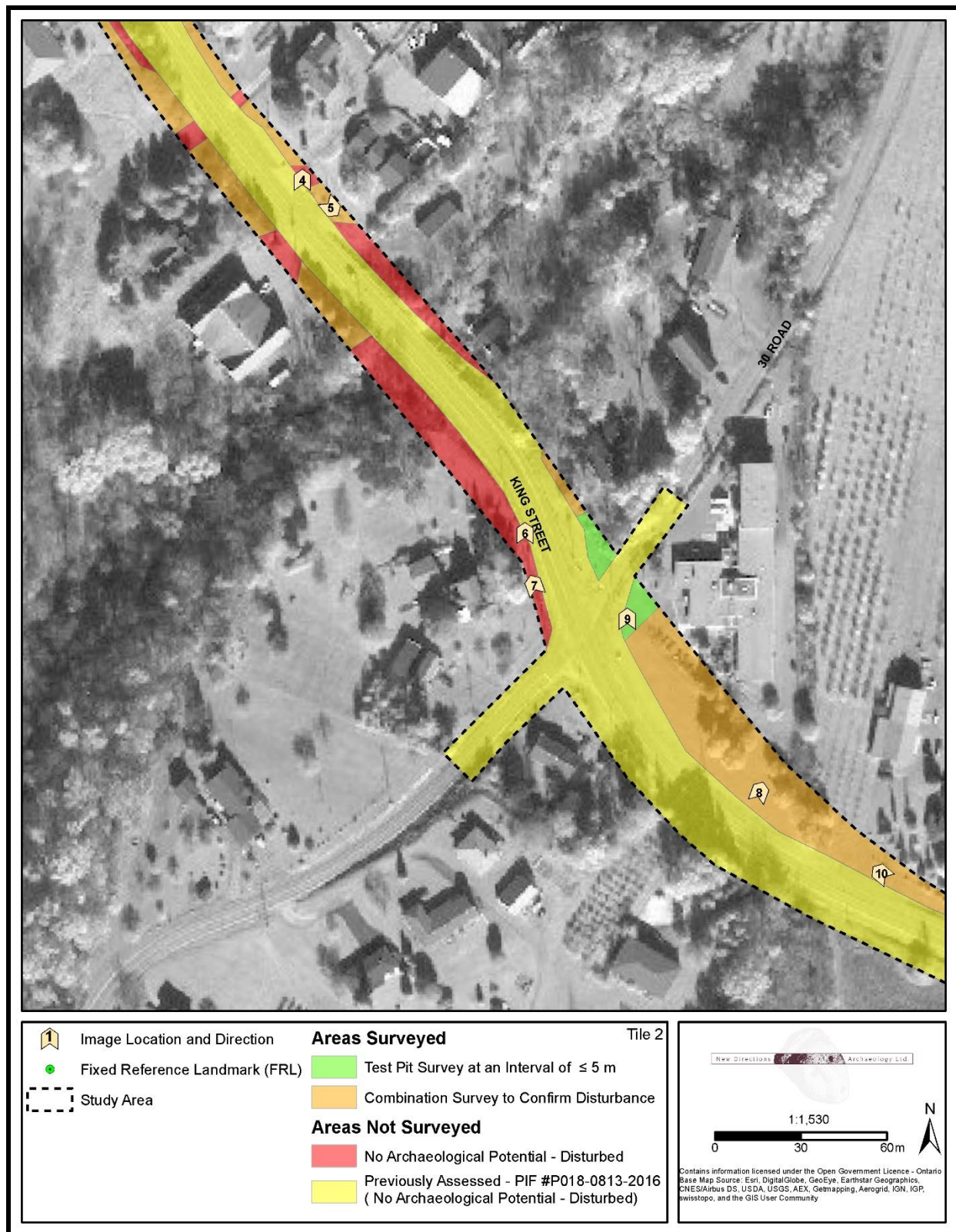


Map 5: Study Area on 1954 Aerial Imagery

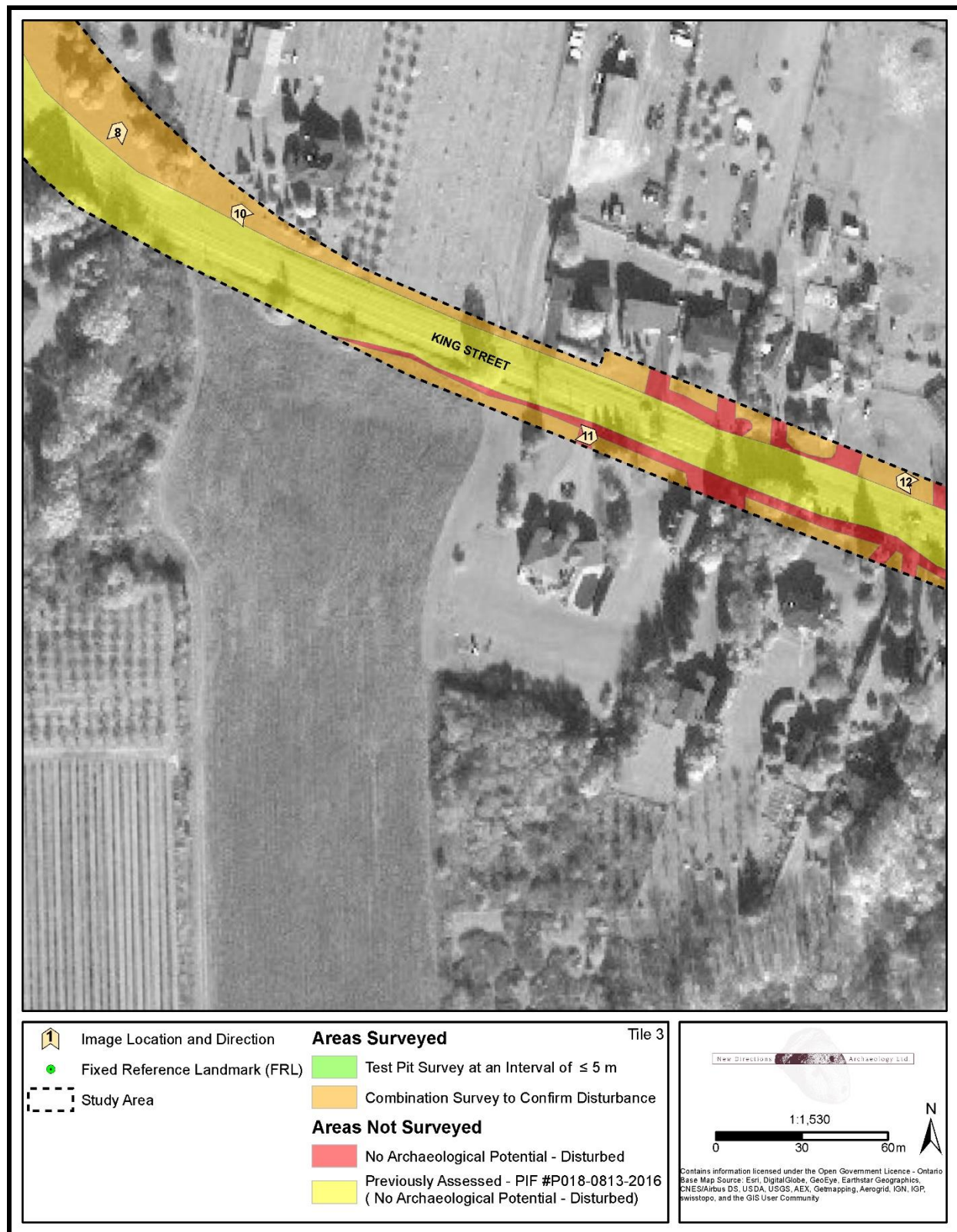


Map 6: Assessment Results - Overview

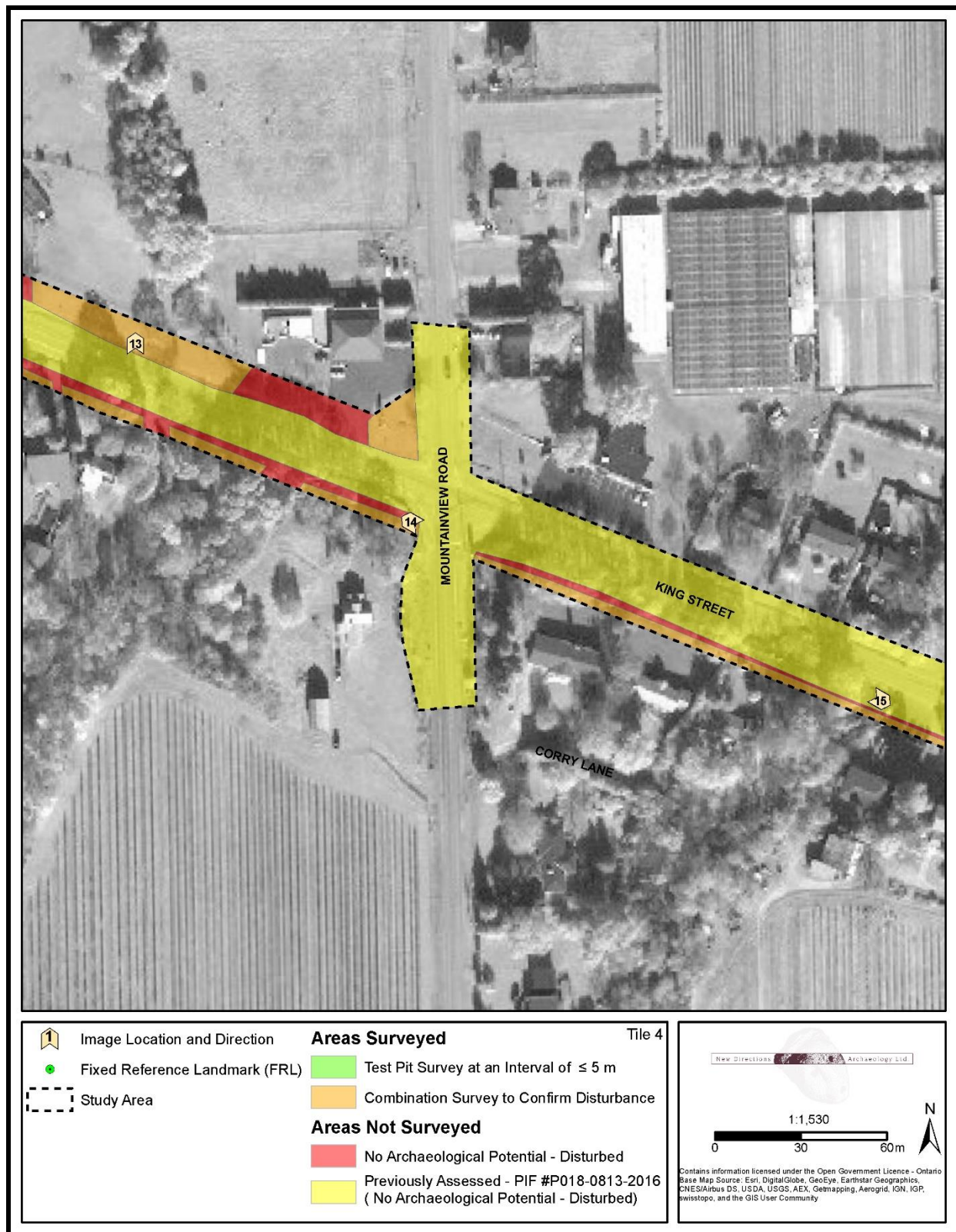




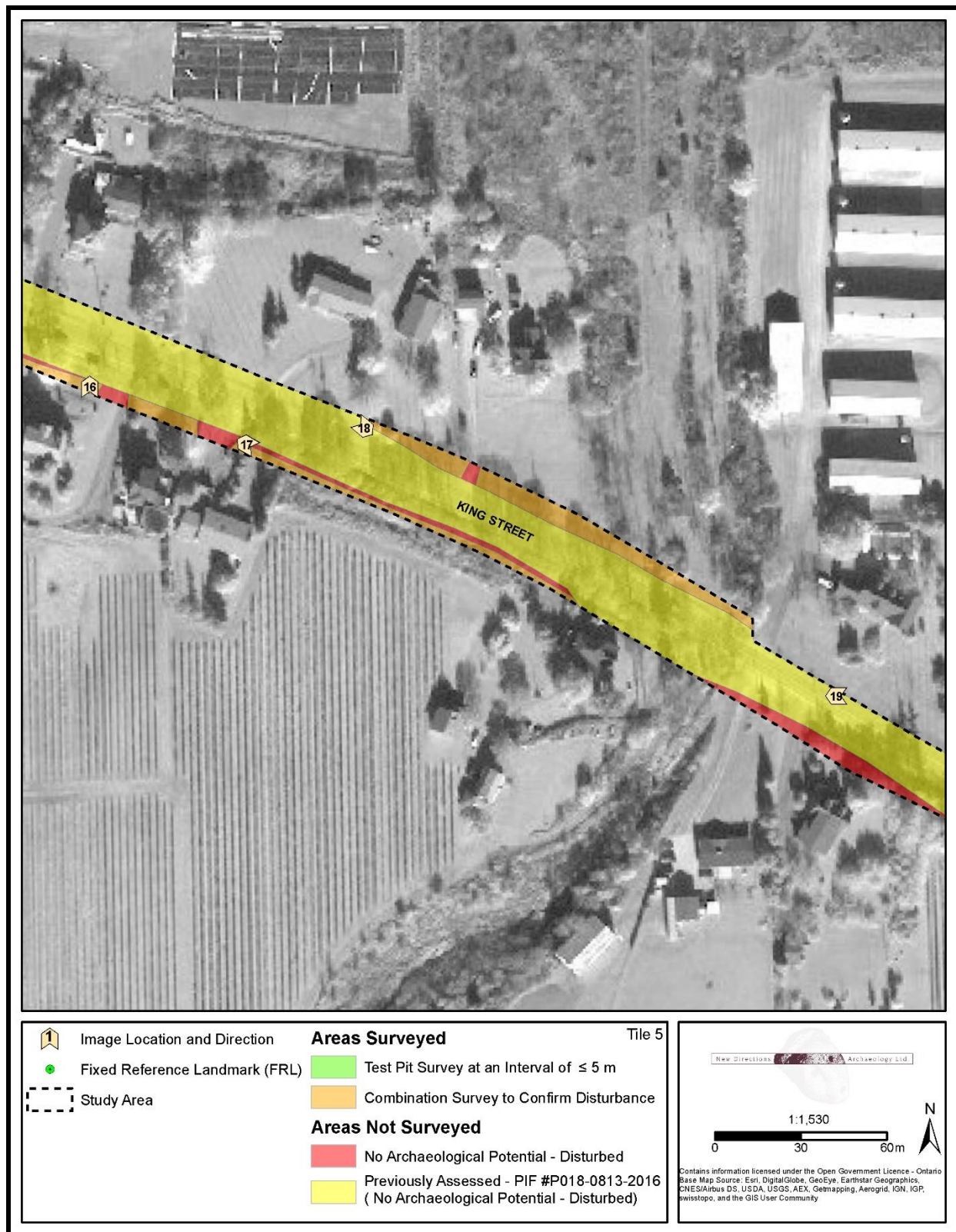
Map 8: Assessment Results – Tile 2



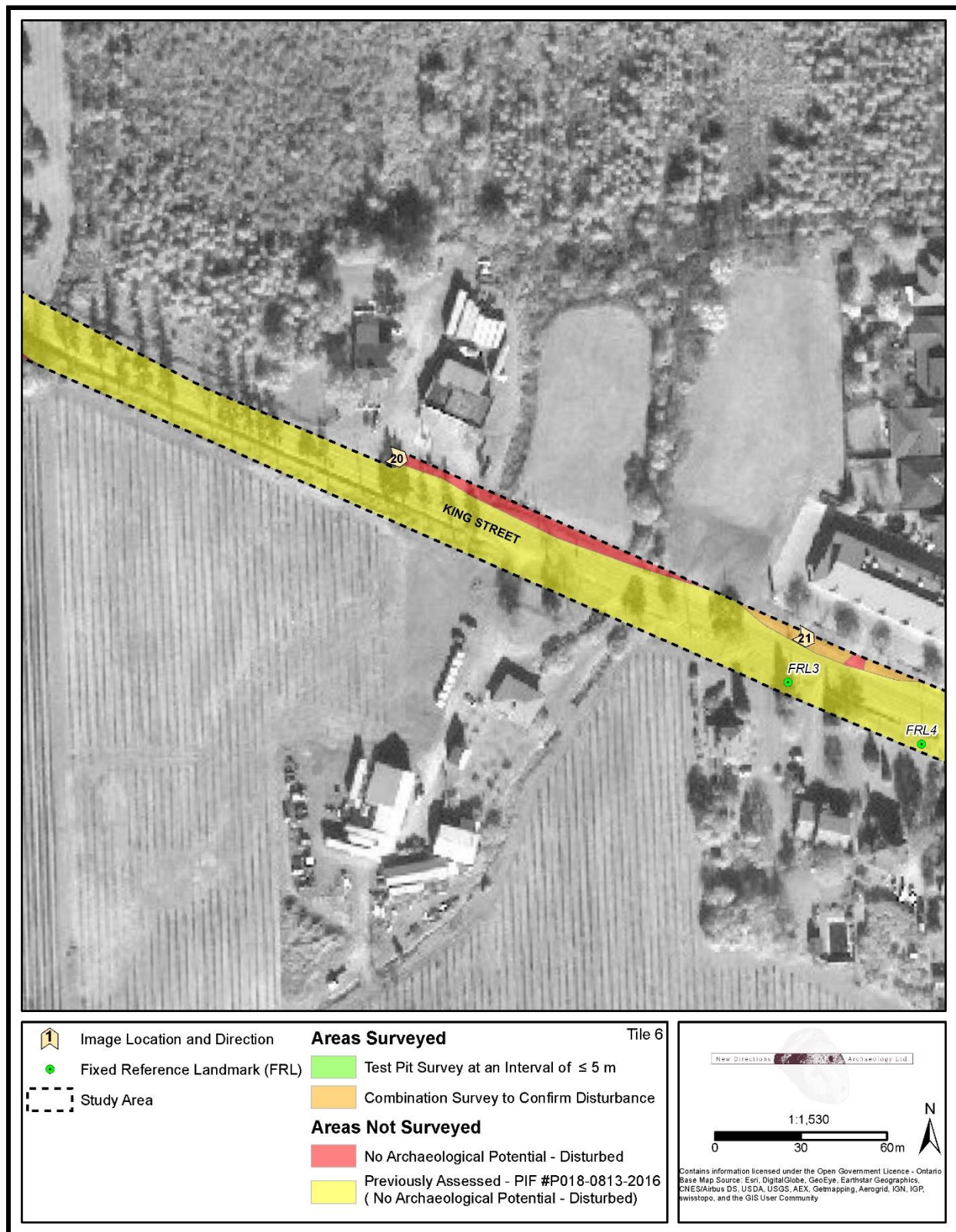
Map 9: Assessment Results – Tile 3



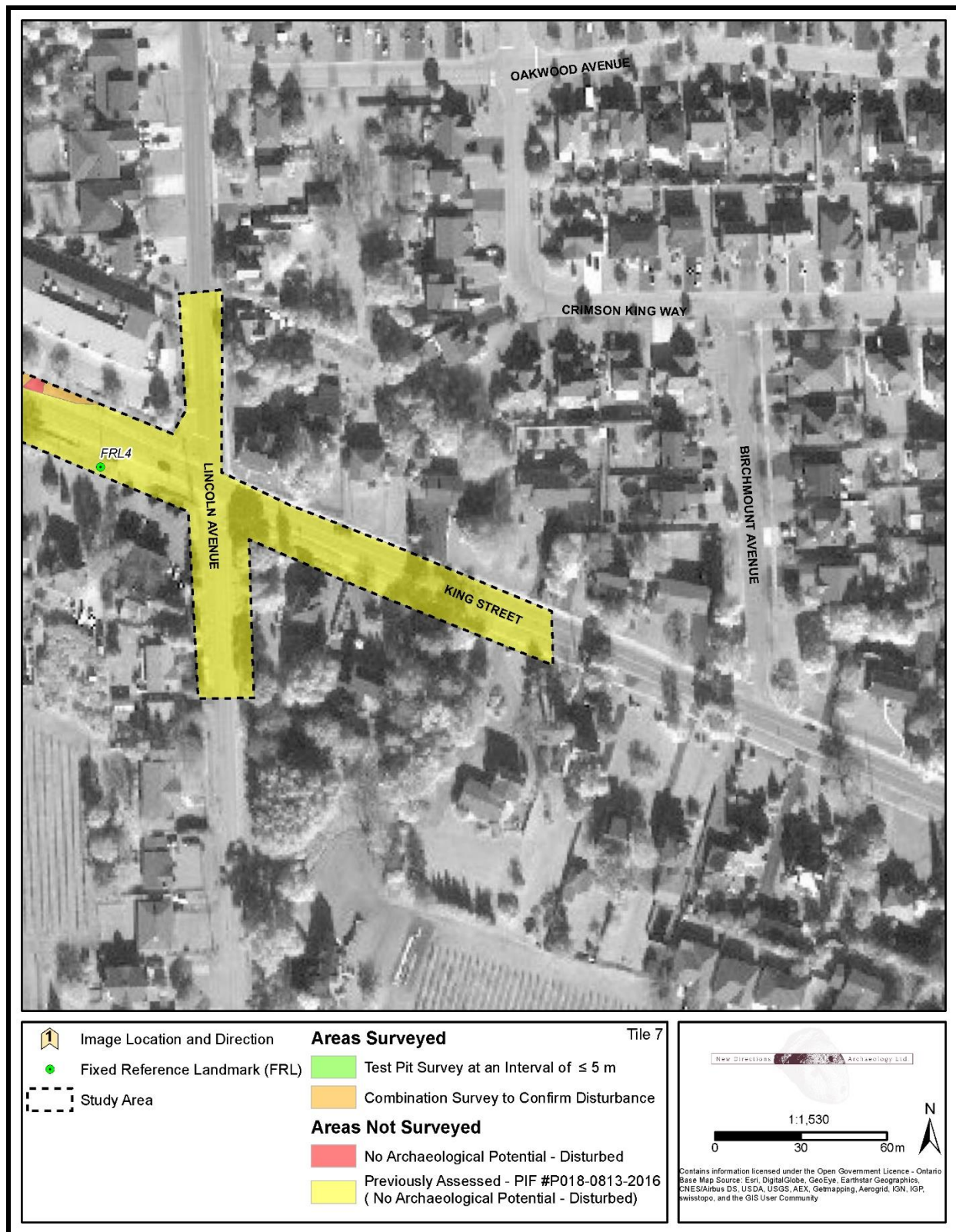
Map 10: Assessment Results – Tile 4



Map 11: Assessment Results – Tile 5



Map 12: Assessment Results – Tile 6



Map 13: Assessment Results – Tile 7

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APPENDICES

APPENDIX I: Unaltered Development Plans

APPENDIX II: Document Inventory

Assessment	Field Documents	Total	Nature	Location
Stage 2 Archaeological Assessment of RR81, Lincoln	Photographs	93	Digital	On server at 1480 Sandhill Drive, Unit 3, Ancaster; Folder P018-0901-2017
	Field Notes	4	Digital and hard copy	On server and on file at 1480 Sandhill Drive, Unit 3, Ancaster; Folder P018-0901-2017
	Field Maps	7	Digital and hard copy	On server and on file at 1480 Sandhill Drive, Unit 3, Ancaster; Folder P018-0901-2017